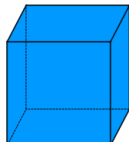
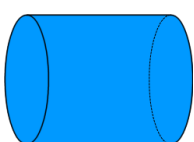


Minimum Surface Area

Cylinder p. 462
Rectangular Prism p. 470

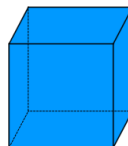
Students will identify the minimum surface Area formulas used for optimal cylinders and cubes.

Identify the relationship for optimal cylinders and cubes.
Recall Volume



May 28-10:55 AM

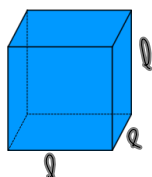
Create Formula Optimal Rectangular
Prism
Use Eqao sheet for a rectangular prism



SA =

May 28-11:56 AM

Create Formula Optimal Rectangular
Prism
Use Eqao sheet for a rectangular
prism

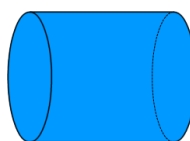


$$SA = 2(lw + lw + lh) \\ = 6(l^2)$$

$$V = l^3$$

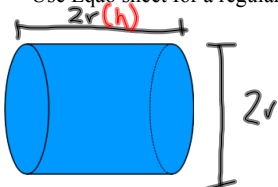
May 28-11:56 AM

Create Formula Optimal Cylinder
Use Eqao sheet for a regular cylinder



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Create Formula Optimal Cylinder
Use Eqao sheet for a regular cylinder



$$SA = 2\pi r^2 + 2\pi r h$$

$$SA = 2\pi r^2 + 2\pi r (2r)$$

$$SA = 2\pi r^2 + 4\pi r^2$$

$$SA = 6\pi r^2$$

$$V = \pi r^2 \times h \\ V = 2\pi r^3$$

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Seatwork
p. 463-466
q. 11, 12, 14 & 17
p. 473-474
q. 9, 11, 13 & 17

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p463 q12 a) 1884 cm^2

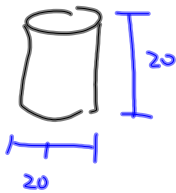
$$SA = 6\pi r^2$$

$$\frac{1884}{6\pi} = \frac{6\pi r^2}{6\pi}$$

$$\frac{1884}{6(3.14)} = r^2$$

$$\frac{1884}{18.85} = r^2$$

$$\sqrt{100} = \sqrt{r^2}$$

$$10 = r$$


May 28-1:33 PM

p473

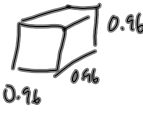
q11

$5.5 \text{ m}^2 \rightarrow \text{cube}$
Optimal Surface Area

$$SA = 6l^2$$

$$5.5 = 6l^2$$

$$\frac{5.5}{6} = \frac{6l^2}{6}$$

$$0.92 = l^2$$


$0.96 \rightarrow l$
Optimal Volume

$$V = l^3$$

$$V = (0.96)^3$$

$$V = 0.88 \text{ m}^3$$

May 28-1:39 PM